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APPENDIX III.

[Vide answer to clause (c) of the starred question No. 688 asked by Sri S. M. Annamalai (on behalf of Sri M. P. Sarathi) at the meeting of the Legislative Assembly held on 16th April 1960, page 86 supra.]

Particulars regarding the work so far done by the Geological section in the State Directorate of Industries are given below :—

Bauxite Investigation.—The first work undertaken by the Geological section was on the bauxite ores of the Shevaroy hills. This work was undertaken as a consequence of the difference of opinion among the various investigators regarding the reserves and the quality of the ore. The Government, therefore, instructed this section to carry out detailed prospecting work. For this purpose about 30 test pits more than the number put up by the Geological Survey of India were made and about 700 bauxite samples from various depths taken and these were analysed in the Chemical Testing and Analytical Laboratory at Guindy to find out the quality of the ore. This work took about 3 months and the results of this work have been embodied in the preliminary report on the bauxite in which it is stated that there were sufficient reserves of the ore and that the ore can also be used for the establishment of an Aluminium Plant. All the information collected by the section has been supplied to the Italian Experts.

Gypsum (Fertiliser Industry).—The next work taken up by the Geological section was for the setting up of a fertilizer plant in Tiruchirappalli district with the object of using the mineral gypsum occurring in the district. For this purpose a much more detailed examination than that of the Geological Survey of India was carried out to find out the actual extent of the gypsum in it. Further work will be carried out shortly by drilling, to estimate the depth to which the mineral extends, so that a reliable data about the actual reserves and the quality of the mineral may be obtained. As some difficulty was anticipated to separate the clay and the gypsum the Geological Expert Mr. Floyd of the Techno-economic Survey of the Government of India has also been consulted.

Limestones (Cement Industry).—With a view to establish cement and other allied industries, the Government desired to have a much more detailed information than the one that has been supplied by the Geological Survey of India regarding the reserves of the various grades of limestones in the State. It was, therefore, proposed to examine all the limestone deposits in the State systematically.

According to the instructions of the Sub-Committee for Cement and Medium Scale Industries this work was first started in the Tirunelveli district to find out the different grades of limestones and their quality. For this purpose, drilling operations were also carried out with the new Diamond drill near Valliyoor to find out the depth to which the crystalline limestones in that area extended. The result of this investigation showed, that it was possible to start another small cement plant in the southern portion of the Tirunelveli district

In the Coimbatore district, search was made for the occurrence of limestones in addition to that used by the A.C.C. works with a view to establish additional cement plant in that district. For this

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purpose the limestones around Ettimadai and further south were investigated and found that there was sufficient reserves of limestones for another small cement plant.

In the Salem district, the Geological Survey of India has investigated only the high grade limestones. It was found necessary to re-examine all the limestones with a view to find out the quality of the different type of deposits so that each type may be used for a particular purpose and also the actual quantity of the usable material. This work was investigated between the Cauveri river and Namakkal town in that district.

Refractory clays.—The department desired to know the reserves of clays around Sivaganga, its extent, quality and usefulness. The investigation by the Geological section has shown that there are fairly large reserves of clays near Sivaganga and further north-east and these have refractory qualities which may be used to manufacture refractory or fire resisting bricks and other allied products.

The Geological section has also found out similar clays about five miles south of Thanjavur near Vallam. Small deposits of clay has also been found recently in private lands, near Elluthorai about three miles from Coonoor.

Paint materials.—Some of the clays such as yellow and red found near Sivaganga are suitable for making paints.

Graphite.—At Kurunjikulam near Kuruvikulam in the Tirunelveli district, the graphite deposits were examined with a view to utilize them in the pencil industry. Some trial pits were put in the area and the graphite was found to be fairly of good grade. About a thousand tons of graphite have been estimated in the area.

Iron ore.—So far, there was no report of the occurrence of iron ores on the Nilgiris except the one used by Messrs. Textools, Limited. The Geological section made a search and found some deposits near Kuruduguli south of Ootacamund though the reserves and quality were not sufficient for export purposes.

A small iron ore deposit also was investigated south of Chingleput on the hills near Vembakkam. This was only magnetite and the reserves were not much.

Bauxite in the Nilgiris.—Recently bauxite deposits have been discovered on the Nilgiri hills in some places. The analysis of a few surface samples have indicated that these deposits are nearly of the same type as that of the Shevaroy hills. The correct reserves and quality can only be determined after detailed prospecting work is conducted as has been done in the Shevaroy hills.

Ilimenite.—Ilimenite ore containing titanium has been discovered in a tea estate at Kollimalai near Ketti, Nilgiris. Prospecting work could not be carried out, as it is in a private land. The analysis of one sample indicates that it contains as much as 40 per cent of titanium.

Moonstone.—About five miles near Kangayam in Coimbatore district, the Geological section examined the semi-precious stones, moonstones and " Felspar " which may be used if, properly cut and polished as semi-precious stones.

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Black diamond.—An examination was also made of the reported occurrence of diamond, coal, etc., near Pattiveeranpatti in the Madurai district and also in Golden Rock in the Tiruchirappalli district. They were found to be other than those mentioned above.

Vallam pebbles.—The stone pebbles near Vallam and other places in the Thanjavur district were examined to see, if they can be used to start spectacle industry on Cottage Industry basis. A report on this has already been submitted.

The emanation of gas near Vallampadugai was also investigated and it was not found to be of economic importance.

The Geological section was also asked to examine the site selected for establishing a raw film manufacturing factory near Ootacamund. For this purpose, some pits were put at selected sites and the soils were analysed to find out the nature of the ground.

Ground water.—The Geological section was consulted about the ground water resources in connection with the setting up of a sugar mill in Chingleput district in the Padalam and Thandalam areas.

The Geological section also collaborated with the Geological Survey of India in the investigation of water resources near Avadi for the setting up of Defence Industries.

Inspection of sites from the geological point of view for establishing factories such as Surgical Instruments Factory, Iron and Steel Plant and Basic Chemicals Project were also made by the Geological section.

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